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VIEWPOINT

General Guidelines for using the Sediment Quality Triad

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The Sediment Quality Triad (Fig. 1), developed in the mid-1980s (Long and Chapman, 1985), is now widely used for conducting integrated assessments of sediment quality based on measures of chemistry, toxicity and benthos (e.g. Canfield *et al.*, 1994, 1996, submitted; Carr *et al.*, 1996; Chapman, 1992; Chapman *et al.*, 1987, 1991a, 1996; Green *et al.*, 1993; Swartz *et al.*, 1994; Paine *et al.*, 1996). General guidance on using the Triad was originally provided by Chapman (1990), subsequently updated by Chapman *et al.* (1991b) and most recently by Chapman (1996).

In September 1996 the US National Oceanic and Atmospheric Administration held a workshop on the Triad in Seattle, WA, USA. The purposes of this workshop included: 1. reviewing the status of the Triad as an assessment tool for environmental management; 2. discussing conceptual and analytical issues associated with measures of contamination, toxicity assessments, and *in situ* biological changes, and recommending methods to improve such measures; and, 3. discussing the feasibility and options to derive a numerical index to

Triad. These are reported herein together with recommendations for further development of the Triad.

describe the condition of the coastal environment based on the Triad.

This workshop resulted in consensus statements that, taken together, provide general guidelines for using the